United States Patent [19]

Reitmeier

[11] **4,282,546**

[45] **Aug. 4, 1981**

[54] **TELEVISION IMAGE SIZE ALTERING APPARATUS**

[75] Inventor: **Glenn A. Reitmeier,** Trenton, N.J.

[73] Assignee: **RCA Corporation,** New York, N.Y.

[21] Appl. No.: **98,357**

[22] Filed: **Nov. 28, 1979**

[51] **Int. Cl.**[3] **H04N 9/535**

[52] **U.S. Cl.** **358/22;** 358/183; 358/160

[58] **Field of Search** ..... 358/21 R, 22, 160, 180, 358/183

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,134,128	1/1979	Hurst	358/22
4,163,249	7/1979	Michael	358/21 R
4,204,227	5/1980	Gurley	358/22

FOREIGN PATENT DOCUMENTS

2016857	9/1979	United Kingdom	358/22

OTHER PUBLICATIONS

Patten; "The Digital Video Effects (DVE) System"; Apr., 1978; pp. 214–218, SMPTE Journal; vol. 87.

Squeezoom, Vital Industries, Inc.

Primary Examiner—Robert L. Griffin
Assistant Examiner—Michael A. Masinick
Attorney, Agent, or Firm—Paul J. Rasmussen; William H. Meise; John M. O'Meara

[57] **ABSTRACT**

In television image size altering apparatus of the type wherein pixels relating to a composite video signal are sampled at a synchronous real time rate and wherein the flow of pixel information is coordinated through a memory by a write control and a read control, the composite pixel information is separated into original pixels relating to each basic component of the video signal. Interpolated pixel values are then derived from the original pixel values at an effective rate less than the synchronous rate when compressing the image size and at an effective rate greater than the synchronous rate when expanding the image size. The interpolated pixel values are then combined into new pixel values relating to a new composite video signal and the new pixel values are presented for display at the synchronous rate to alter the size of the television image.

6 Claims, 10 Drawing Figures